



OIFE

RAW SEQUENCE LISTING

DATE: 03/13/2002

PATENT APPLICATION: US/09/912,014

TIME: 11:03:28

Input Set : N:\Cr3\RULE60\09912014.raw

Output Set: N:\CRF3\03132002\I912014.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: Heller, Michael J.; and Tu, Eugene

8 (ii) TITLE OF INVENTION: SELF-ADDRESSABLE SELF-ASSEMBLING

9 MICROELECTRONIC SYSTEMS AND DEVICES FOR

10 MOLECULAR BIOLOGICAL ANALYSIS AND

11 DIAGNOSTICS

13 (iii) NUMBER OF SEQUENCES: 31

15 (iv) CORRESPONDENCE ADDRESS:

17 (A) ADDRESSEE: Lyon & Lyon

18 (B) STREET: 611 West Sixth Street

19 (C) CITY: Los Angeles

20 (D) STATE: California

21 (E) COUNTRY: USA

22 (F) ZIP: 90017

24 (v) COMPUTER READABLE FORM:

26 (A) MEDIUM TYPE: 3.5" Diskette, 1.44 Mb

28 (B) COMPUTER: IBM compatible

30 (C) OPERATING SYSTEM: IBM P.C. DOS (Version 5.0)

31 (D) SOFTWARE: WordPerfect (Version 5.1)

33 (vi) CURRENT APPLICATION DATA:

C--> 35 (A) APPLICATION NUMBER: US/09/912,014

C--> 36 (B) FILING DATE: 24-Jul-2001

37 (C) CLASSIFICATION:

39 (vii) PRIOR APPLICATION DATA:

41 (A) APPLICATION NUMBER: 08/146,504

42 (B) FILING DATE:

44 (viii) ATTORNEY/AGENT INFORMATION:

46 (A) NAME: Warburg, Richard J.

47 (B) REGISTRATION NUMBER: 32,327

48 (C) REFERENCE/DOCKET NUMBER: 203/218

50 (ix) TELECOMMUNICATION INFORMATION:

52 (A) TELEPHONE: (213) 489-1600

53 (B) TELEFAX: (213) 955-0440

54 (C) TELEX: 67-3510

57 (2) INFORMATION FOR SEQ ID NO: 1:

59 (i) SEQUENCE CHARACTERISTICS:

61 (A) LENGTH: 24

62 (B) TYPE: nucleic acid

63 (C) STRANDEDNESS: single

64 (D) TOPOLOGY: linear

C--> 66 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

68 GCTAGCCCCT GCTCATGAGT CTCU

ENTERED

24

RAW SEQUENCE LISTING

DATE: 03/13/2002

PATENT APPLICATION: US/09/912,014

TIME: 11:03:28

Input Set : N:\Crf3\RULE60\09912014.raw

Output Set: N:\CRF3\03132002\I912014.raw

```

72 (2) INFORMATION FOR SEQ ID NO: 2:
74     (i) SEQUENCE CHARACTERISTICS:
76         (A) LENGTH: 21
77         (B) TYPE: nucleic acid
78         (C) STRANDEDNESS: single
79         (D) TOPOLOGY: linear
C--> 81     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
83     AAAAAAAAAA AAAAAAAAAA U                                     21
87 (2) INFORMATION FOR SEQ ID NO: 3:
89     (i) SEQUENCE CHARACTERISTICS:
91         (A) LENGTH: 34
92         (B) TYPE: nucleic acid
93         (C) STRANDEDNESS: single
94         (D) TOPOLOGY: linear
C--> 96     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
98     CTACGTGGAC CTGGAGAGGA AGGAGACTGC CTGU                      34
102 (2) INFORMATION FOR SEQ ID NO: 4:
104     (i) SEQUENCE CHARACTERISTICS:
106         (A) LENGTH: 20
107         (B) TYPE: nucleic acid
108         (C) STRANDEDNESS: single
109         (D) TOPOLOGY: linear
C--> 111     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
113     GAGTTCAGCA AATTGAGU                                         20
117 (2) INFORMATION FOR SEQ ID NO: 5:
119     (i) SEQUENCE CHARACTERISTICS:
121         (A) LENGTH: 20
122         (B) TYPE: nucleic acid
123         (C) STRANDEDNESS: single
124         (D) TOPOLOGY: linear
C--> 126     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
128     CGTAGAACTC CTCATCTCCU                                       20
132 (2) INFORMATION FOR SEQ ID NO: 6:
134     (i) SEQUENCE CHARACTERISTICS:
136         (A) LENGTH: 18
137         (B) TYPE: nucleic acid
138         (C) STRANDEDNESS: single
139         (D) TOPOLOGY: linear
C--> 141     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
143     GTCTCCTTCC TCTCCAGU                                         18
147 (2) INFORMATION FOR SEQ ID NO: 7:
149     (i) SEQUENCE CHARACTERISTICS:
151         (A) LENGTH: 20
152         (B) TYPE: nucleic acid
153         (C) STRANDEDNESS: single
154         (D) TOPOLOGY: linear
C--> 156     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
158     GATGAGCAGT TCTACGTGGU                                       20
162 (2) INFORMATION FOR SEQ ID NO: 8:

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/912,014

DATE: 03/13/2002

TIME: 11:03:28

Input Set : N:\Crif3\RULE60\09912014.raw

Output Set: N:\CRF3\03132002\I912014.raw

```

164      (i) SEQUENCE CHARACTERISTICS:
166          (A) LENGTH: 18
167          (B) TYPE: nucleic acid
168          (C) STRANDEDNESS: single
169          (D) TOPOLOGY: linear
C--> 171      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
173          CTGGAGAAGA AGGAGACU
177      (2) INFORMATION FOR SEQ ID NO: 9:
179          (i) SEQUENCE CHARACTERISTICS:
181              (A) LENGTH: 22
182              (B) TYPE: nucleic acid
183              (C) STRANDEDNESS: single
184              (D) TOPOLOGY: linear
C--> 186      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
188          TTCCACAGAC TTAGATTGA CU
192      (2) INFORMATION FOR SEQ ID NO: 10:
194          (i) SEQUENCE CHARACTERISTICS:
196              (A) LENGTH: 20
197              (B) TYPE: nucleic acid
198              (C) STRANDEDNESS: single
199              (D) TOPOLOGY: linear
C--> 201      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
203          TTCCGCAGAT TTAGAAGATU
206      (2) INFORMATION FOR SEQ ID NO: 11:
208          (i) SEQUENCE CHARACTERISTICS:
210              (A) LENGTH: 20
211              (B) TYPE: nucleic acid
212              (C) STRANDEDNESS: single
213              (D) TOPOLOGY: linear
C--> 215      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
217          TGTTTGCTG TTCTCAGACU
221      (2) INFORMATION FOR SEQ ID NO: 12:
223          (i) SEQUENCE CHARACTERISTICS:
225              (A) LENGTH: 20
226              (B) TYPE: nucleic acid
227              (C) STRANDEDNESS: single
228              (D) TOPOLOGY: linear
C--> 230      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
232          CATCGCTGTG ACAAACATU
236      (2) INFORMATION FOR SEQ ID NO: 13:
238          (i) SEQUENCE CHARACTERISTICS:
240              (A) LENGTH: 20
241              (B) TYPE: nucleic acid
242              (C) STRANDEDNESS: single
243              (D) TOPOLOGY: linear
C--> 245      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
247          TGCAGCTGC AGTCAGACAT
251      (2) INFORMATION FOR SEQ ID NO: 14:
253          (i) SEQUENCE CHARACTERISTICS:

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/912,014

DATE: 03/13/2002

TIME: 11:03:28

Input Set : N:\Crf3\RULE60\09912014.raw

Output Set: N:\CRF3\03132002\I912014.raw

```

255      (A) LENGTH: 18
256      (B) TYPE: nucleic acid
257      (C) STRANDEDNESS: single
258      (D) TOPOLOGY: linear
C--> 260      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
262      GAGAGACTCA TGAGCAGG                                     18
266 (2) INFORMATION FOR SEQ ID NO: 15:
268      (i) SEQUENCE CHARACTERISTICS:
270          (A) LENGTH: 18
271          (B) TYPE: nucleic acid
272          (C) STRANDEDNESS: single
273          (D) TOPOLOGY: linear
C--> 275      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
277      CCTGCTCATG AGTCTCTC                                     18
281 (2) INFORMATION FOR SEQ ID NO: 16:
283      (i) SEQUENCE CHARACTERISTICS:
285          (A) LENGTH: 20
286          (B) TYPE: nucleic acid
287          (C) STRANDEDNESS: single
288          (D) TOPOLOGY: linear
C--> 290      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:
292      TTTTTTTTTT TTTTTTTTTT                                     20
296 (2) INFORMATION FOR SEQ ID NO: 17:
298      (i) SEQUENCE CHARACTERISTICS:
300          (A) LENGTH: 33
301          (B) TYPE: nucleic acid
302          (C) STRANDEDNESS: single
303          (D) TOPOLOGY: linear
C--> 305      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:
307      CAGGCAGTCT CCTTCCTCTC CAGGTCCACG TAG                     33
311 (2) INFORMATION FOR SEQ ID NO: 18:
313      (i) SEQUENCE CHARACTERISTICS:
315          (A) LENGTH: 19
316          (B) TYPE: nucleic acid
317          (C) STRANDEDNESS: single
318          (D) TOPOLOGY: linear
C--> 320      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:
322      CTCCAAATTT GCTGAACTC                                     19
326 (2) INFORMATION FOR SEQ ID NO: 19:
328      (i) SEQUENCE CHARACTERISTICS:
330          (A) LENGTH: 19
331          (B) TYPE: nucleic acid
332          (C) STRANDEDNESS: single
333          (D) TOPOLOGY: linear
C--> 335      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:
337      GGAGATGAGG AGTCTACG                                     19
341 (2) INFORMATION FOR SEQ ID NO: 20:
343      (i) SEQUENCE CHARACTERISTICS:
345          (A) LENGTH: 17

```

RAW SEQUENCE LISTING

DATE: 03/13/2002

PATENT APPLICATION: US/09/912,014

TIME: 11:03:28

Input Set : N:\Crf3\RULE60\09912014.raw

Output Set: N:\CRF3\03132002\I912014.raw

```

346         (B) TYPE: nucleic acid
347         (C) STRANDEDNESS: single
348         (D) TOPOLOGY: linear
C--> 350     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:
352         CTGGAGAGGA AGGAGAC                                17
356 (2) INFORMATION FOR SEQ ID NO: 21:
358     (i) SEQUENCE CHARACTERISTICS:
360         (A) LENGTH: 19
361         (B) TYPE: nucleic acid
362         (C) STRANDEDNESS: single
363         (D) TOPOLOGY: linear
C--> 365     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:
367         CCACGTAGAA CTGCTCATC                                19
371 (2) INFORMATION FOR SEQ ID NO: 22:
373     (i) SEQUENCE CHARACTERISTICS:
375         (A) LENGTH: 17
376         (B) TYPE: nucleic acid
377         (C) STRANDEDNESS: single
378         (D) TOPOLOGY: linear
C--> 380     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:
382         GTCTCCTTCT TCTCCAG                                17
386 (2) INFORMATION FOR SEQ ID NO: 23:
388     (i) SEQUENCE CHARACTERISTICS:
390         (A) LENGTH: 21
391         (B) TYPE: nucleic acid
392         (C) STRANDEDNESS: single
393         (D) TOPOLOGY: linear
C--> 395     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:
397         GTCAAATCTA AGTCTGTGGA A                            21
401 (2) INFORMATION FOR SEQ ID NO: 24:
403     (i) SEQUENCE CHARACTERISTICS:
405         (A) LENGTH: 19
406         (B) TYPE: nucleic acid
407         (C) STRANDEDNESS: single
408         (D) TOPOLOGY: linear
C--> 410     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:
412         ATCTTCTAAA TCTGCGGAA                                19
416 (2) INFORMATION FOR SEQ ID NO: 25:
418     (i) SEQUENCE CHARACTERISTICS:
420         (A) LENGTH: 19
421         (B) TYPE: nucleic acid
422         (C) STRANDEDNESS: single
423         (D) TOPOLOGY: linear
C--> 425     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:
427         GTCTGAGAAC AGGCAAACA                                19
431 (2) INFORMATION FOR SEQ ID NO: 26:
433     (i) SEQUENCE CHARACTERISTICS:
435         (A) LENGTH: 19
436         (B) TYPE: nucleic acid

```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 03/13/2002
PATENT APPLICATION: US/09/912,014 TIME: 11:03:29

Input Set : N:\Crf3\RULE60\09912014.raw
Output Set: N:\CRF3\03132002\I912014.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 72
Seq#:2; Line(s) 87
Seq#:3; Line(s) 102
Seq#:4; Line(s) 117
Seq#:5; Line(s) 132
Seq#:6; Line(s) 147
Seq#:7; Line(s) 162
Seq#:8; Line(s) 177
Seq#:9; Line(s) 192
Seq#:10; Line(s) 206
Seq#:11; Line(s) 221
Seq#:12; Line(s) 236
Seq#:13; Line(s) 251
Seq#:14; Line(s) 266
Seq#:15; Line(s) 281
Seq#:16; Line(s) 296
Seq#:17; Line(s) 311
Seq#:18; Line(s) 326
Seq#:19; Line(s) 341
Seq#:20; Line(s) 356
Seq#:21; Line(s) 371
Seq#:22; Line(s) 386
Seq#:23; Line(s) 401
Seq#:24; Line(s) 416
Seq#:25; Line(s) 431
Seq#:26; Line(s) 446
Seq#:27; Line(s) 461
Seq#:28; Line(s) 476
Seq#:29; Line(s) 491
Seq#:30; Line(s) 506

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/912,014

DATE: 03/13/2002

TIME: 11:03:29

Input Set : N:\Crf3\RULE60\09912014.raw

Output Set: N:\CRF3\03132002\I912014.raw

L:35 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:36 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:66 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:81 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:96 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:111 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:126 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:141 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:156 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:171 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:186 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:201 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:215 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:230 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:245 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:260 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:275 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:290 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:305 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:320 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:335 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:350 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:365 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:380 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:395 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:410 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:425 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:440 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:455 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:470 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:485 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:500 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:515 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]